WHAT IS CLAIMED IS:

1. A method of performing Frame Erasure Concealment (FEC) for a speech coder that does not have FEC capability, comprising:

receiving encoded frames of compressed speech information transmitted from an encoder;

determining if an encoded frame is erased, lost or corrupted in transmission,

decoding the received encoded frames into decoded frames if the determining step determines that the encoded frame is not erased;

generating a synthetic frame for the erased frame using data of previously decoded frames if the determining step determines that the encoded frame is erased;

updating a first memory with data of the decoded and synthetic frames; and

outputting the decoded and synthetic frames as audio signals.

2. The method of claim 1, further comprising:

delaying the output of the audio signal by a predetermined time period using a delay memory.

3. The method of claim 1, wherein the generating step at the first erased frame in a sequence of one or more erased frames comprises:

estimating the pitch period of the erased frame;

copying one or more of the most recent pitch periods from the first memory to a second memory;

copying a portion of the most recent pitch period from the first memory to a third memory;

overlap adding the third memory with a portion of a pitch period stored in the second memory;

storing the overlap added portion of the pitch period in the most recent portion the second memory;

generating a synthetic frame based on one or more of the most recent pitch periods stored in the second memory, for updating the first memory in the updating step and output in the outputting step; and

storing in an offset pointer the last location in the second memory used in the generating step.

4. The method of claim 3, further comprising:

updating the delay memory with the overlap added portion.

5. The method of claim 1, further comprising:

determining if one or more subsequent encoded frames are erased after a synthetic frame is output.

6. The method of claim 5, wherein if one or more subsequent encoded frames are erased, the method further comprises:

determining if the number of consecutive erased frames exceeds a predetermined length;

modifying the number of pitch periods used to generate the synthetic frame if the determining step determines the number of consecutive erased frames does not exceed a predetermined length; and

continuing the synthetic frame generation with the current number of pitch periods if the determining step determines the number of consecutive erased frames exceeds a predetermined length.

7. The method of claim 6, wherein if the number of consecutive erased frames does not exceed a predetermined length, the modifying step further comprises:

continuing the generation of the synthetic signal from the previous frame for a portion of a pitch period and placing the result into a fourth memory;

increasing the number of pitch periods used in a second memory;

overlap adding the third memory with a portion of a pitch period stored in the second memory and storing the result in the most recent portion of the second memory;

moving the offset pointer by pitch periods until it points to the new portion of the second memory;

generating a synthetic frame's worth of data by copying data from the second memory to a fifth memory;

storing in an offset pointer the last location in the second memory used in the generating step;

overlap adding the fourth memory with a portion of a pitch period in the fifth memory and storing the result in the fifth memory;

determining if the erased frames exceed a predetermined length; and

attenuating the fifth memory based on the length of the erasure if the determining step determines the erased frames exceed a predetermined length, the fifth memory being used for updating the first memory in the updating step and outputting in the outputting step.

8. The method of claim 6, wherein if the number of consecutive erased frames does exceed a predetermined length the continuing step further comprises:

generating a synthetic frame's worth of data by copying data from the second memory to a fifth memory;

storing in an offset pointer the last location in the second memory used in the generating step;

determining if the erased frames exceed a predetermined length; and

attenuating the fifth memory based on the length of the erasure if the determining step determines the erased frames exceed a predetermined length, the fifth memory being used for updating the first memory in the updating step and outputting in the outputting step.

9. The method of claim 5, wherein if the subsequently encoded frames are not erased, the method further comprises:

processing the first non-erased encoded frame using an FEC process.

10. The method of claim 9, wherein the processing step further comprises:

generating a synthetic frame's worth of data by copying data from the second memory to a fifth memory;

determining if the erased frames exceed a predetermined length;

attenuating the fifth memory based on the length of the erasure if the determining step determines the erased frames exceed a predetermined length;

overlap adding a portion of the fifth memory with the start of first non-erased decoded frame and storing the result in the fifth memory; and

copying the non-overlap added region of the decoded frame to the fifth memory, the fifth memory being used to update the first memory in the updating step and outputting in the outputting step.

11. The method of claim 1, wherein the number of pitch periods used to generate the synthetic frames increases as a function of time.

12. The method of claim 1, wherein the generating step uses an encoder so the decoder's state variables track the synthetic frames.

13. The method of claim 1, wherein for high frequency input signals, one or more pitch periods are used to generate the synthetic frames.

14. The method of claim 3, wherein the estimating step uses autocorrelation for the pitch period estimate if the decoder does not maintain a pitch estimate, and the decoder's pitch estimate is used if the decoder does maintain the pitch estimate.

15. The method of claim 10, wherein a length of the overlap added increases with the length of the erased frames.

16. The method of claim 6, wherein the first memory is a history buffer, the second memory is a pitch buffer, the third memory is a lastquarter buffer, the fourth memory is a temporary buffer, and the fifth memory is an output buffer.

17. An apparatus of performing Frame Erasure Concealment (FEC) for a speech coder that does not have FEC capability, comprising:

a lost frame detector that receives encoded frames of compressed speech information transmitted from an encoder and determines if an encoded frame is missing, lost or corrupted in transmission;

a decoder that decodes the received encoded frames into decoded frames if the lost frame detector determines that the encoded frame is not erased;

an FEC module that generates a synthetic frame for the erased frame using data of previously decoded frames if the lost frame detector determines that the encoded frame is erased;

a first memory that is updated with data of the decoded and synthetic frames; and

an output device that outputs the decoded synthetic frames as audio signals.

18. The apparatus of claim 17, further comprising:

a delay module that delays the output of the audio signal by a predetermined time period using a delay memory.

19. The apparatus of claim 17, wherein at the first erased frame in a sequence of one or more erased frames, the FEC module estimates pitch period of the erased frame, copies one or more most recent pitch periods from the first memory to a second memory, copies a portion of most recent pitch period from the first memory to a third memory, overlap adds the portion of the pitch period stored in the third memory with a portion of the frames stored in the second memory, stores the overlap added portion of the pitch period in the most recent portion of the pitch period stored in the second memory, generates a synthetic

frame based on one or more of the most recent pitch period stored in the second memory, for updating the first memory and outputting using the output device, and stores the last location used in the second memory as an offset pointer.

20. The apparatus of claim 19, wherein the FEC module updates the delay memory with the overlap added portion.

21. The apparatus of claim 17, wherein the lost frame detector determines if one or more subsequently encoded frames are erased after a synthetic frame is output.

22. The apparatus of claim 21, wherein if the lost frame detector determines that one or more subsequently encoded frames are erased, the FEC module determines if the number of consecutive erased frames exceeds a predetermined length, modifies the number of pitch periods used to generate the synthetic frame if the number of consecutive erased frames is determined not to exceed a predetermined length, and continues the synthetic frame generation with the current number of pitch if the number of consecutive erased frames is determined to exceed a predetermined length.

23. The apparatus of claim 22, wherein if the FEC module determines that the number of consecutive erased frames does not exceed a predetermined length, the FEC module continues the generation of the synthetic signal from the previous frame for a portion of a pitch period and places the result into a fourth memory, increases the number of pitch periods used in a second memory, overlap adds the third memory with a portion of a pitch period stored in the second memory and stores the result in the most recent portion of the second memory, moves the offset pointer by pitch periods until it points to the new portion of the second memory, generates a synthetic frame's worth of data by copying data from the second memory to a fifth memory, stores in an offset pointer the last location used in the second memory, overlap adds the fourth memory with a portion of a pitch period in the fifth memory and stores the result in the fifth memory, determines if the missing frames exceed a predetermined

length, attenuates the fifth memory based on the length of the erasure if the missing frames are determined to exceed a predetermined length, the fifth memory being used for updating the first memory and outputting using the output device.

24. The apparatus of claim 22, wherein if the FEC module determines that the number of consecutive erased frames does exceed a predetermined length, the FEC module generates a synthetic frame's worth of data by copying data from the second memory to a fifth memory, stores in an offset pointer the last location used in the second memory, determines if the missing frames exceed a predetermined length, attenuates the fifth memory based on the length of the erasure if the missing frames are determined to exceed a predetermined length, the fifth memory being used for updating the first memory and outputting using the output device.

25. The apparatus of claim 21, wherein if the subsequently encoded frames are not erased, the FEC module processes a first non-erased encoded frame using an FEC process.

26. The apparatus of claim 25, wherein the FEC module generates a synthetic frame's worth of data by copying data from the second memory to a fifth memory, determines if the missing frames exceed a predetermined length, attenuates the fifth memory based on the length of the erasure if the missing frames are determined to exceed a predetermined length, overlap adds a portion of the fifth memory with the start of the first non-erased decoded frame and stores the result in the fifth memory, copies the non-overlap added region of the decoded frame to the fifth memory, the fifth memory being used for updating the first memory and outputting using the output device.

27. The apparatus of claim 17, wherein the number of pitch periods used to generate the synthetic frames increases as a function of time.

28. The apparatus of claim 17, wherein the FEC module uses an encoder so the decoder's state variables track the synthetic frames.

29. The apparatus of claim 17, wherein for high frequency input signals, one or more pitch periods are used to generate the synthetic frames.

30. The apparatus of claim 19, wherein the FEC module uses autocorrelation for the pitch period estimate if the decoder does not maintain a pitch estimate, and the decoder's pitch estimate is used if the decoder does maintain a pitch estimate.

31. The apparatus of claim 26, wherein a length of the overlap added increases with the length of the missing frames.

32. The apparatus of claim 22, wherein the first memory is a history buffer, the second memory is a pitch buffer, the third memory is a lastquarter buffer, the fourth memory is a temporary buffer, and the fifth memory is an output buffer.